REMARKS

Claims 1 - 15 and 23 - 28 are in the application and are presented for consideration. By this Amendment, Applicant has made clarifying changes to the independent claims. Minor changes have been made to some of the other claims to improve the form of the application.

Claims 1 - 8 and 23 - 27 have been rejected based on McNamee in view of Aoki et al. In applying the art, the Examiner has taken the position that the recited holding area feature is the lack of something, namely a void or space. It is Applicant's position that this is not a fair reading of the claim and that this is not considering the claim language in light of the specification. However, in order to clarify the subject matter, Applicant has requested continuing examination and has noted that this is a holding means with a holding area surface. Of course the original claim included the holding area defining structure and means-plus-function language, namely a holding area for holding the hose. This still should have defined structure, not an absence of structure, not a space or a void. In any event, the clarified claims properly highlight the combination including the holding means with a holding surface area for axially holding the hose. Similar changes have been made to independent claim 26. New claim 28 highlights the same subcombination with the robot (environment), placing the structure in context.

It is Applicant's position that the prior art as a whole fails to teach and fails to suggest the combination of features claimed. McNamee discloses a corrugated conduit with a connection end piece with a holding surface area which engages the corrugation and locks an end to a member 50 which has a credit end. This is basically an end piece for a corrugated

hose. Aoki discloses a fixing structure for a corrugated tube, also an end piece for a corrugated tube. The references fail to suggest the combination of features, particularly structure for use with a robot, such as carrying cables and the like wherein various changes of attitude and position will result in movement of the tube, which can cause wear, etc. The invention avoids the problems with wear by having a trumpet-shaped support surface which the flexible hose can roll over as it changes it orientation relative to a holding part (6). Further the structural allows a fixing of an end of the hose both with respect to axial movement and rotational movement while the structure fixing the end is allowed to rotate (although is held axially) relative to the holding part (6). The invention provides the trumpet-like structure of the holding device together with the free rotatability between the two parts combined with the axial fixation of the two parts. The prior art does not suggest the features in combination.

The Aoki et al. reference is cited based on the device having a support area with an inner curve surface extending from a reduced outer diameter end, adjacent a holding area to an expanded outer diameter end. This is said to be provided so that the corrugated tube is smoothly flexible. However, as can be appreciated from Figs. 4, 6 and 10 of the Aoki reference, the area of the Aoki device has a non-circular format such that a rolling of the corrugated tube along the surfaces will at some point result in the tube hitting or abrading against the corner edge. This structure does not present the benefits according to the invention and does not suggest having a circular cross-section, namely circular ends connected by the trumpet-shaped surface.

The feature discussed at page 2, lines 23 - 30 of the present application allows the

protective hose to roll on the trumpet-like widening or extending supporting area (line 20). This rotary movement takes place between the clamping member or holding part 6 and the trumpet-like part (holding and support single element of claims 26 and 28) or the support surface and holding surface structural portions of claim 1.

The McNamee reference discloses a part 22 for axially holding the corrugated hose 34. As can be seen in the drawings, part 22 is screwed into part 10. Accordingly, there is no rotational movement between these parts. There is no connection that allows free rotation between parts 22 and 10. In McNamee there cannot be such connection that allows free rotation between parts 22 and 10 as this would allow the parts to separate with rotation in one direction. Of course any separation is counter to the teachings of McNamee as the hose is to be frictionally held in part 22 and further a rotation of the hose relative to the part 22 and 10 would result in a squeezing or clamping action.

Claims 1, 3 - 7, 9 and 23 - 27 have been rejected as being obvious based on the teachings of Berger (U.S. 3,498,642) in view of Aoki et al.

The Berger reference discloses similar structure. The part at the left side of Fig. 1 holding the part 15 (which is not corrugated) is the part which is shown in detail in Figs. 3 - 8. This part is a bayonet part with shoulders 34 which are for connecting the part 30 and the part 10. As such, the connection between parts 10 and 30, as shown in Fig. 1, such that the shoulder 34 grips behind the shoulder 22 of part 10. The parts are not free to rotate relative to each other. Any such rotation would result in a disconnection of the parts. Further, in Berger, the pipe 15 and the inner circumference of the part 10 are arranged with a seal 14. This also

clearly indicates that there is no possibility of free rotation between pipe 15 and part 10.

The axial fixation of the support surface and holding surface relative to the holding part while allowing rotation thereof and the fixing of the end of the hose cooperate to provide the advantages of the invention. Such rotational freedom is essential as to the holding part and the support surface and holding surface according to the invention. With Berger, there is no teaching and no suggestion of a hose which is free to rotate. As such, Berger fails to provide teachings and suggestions which are meaningful to direct the person of ordinary skill in the art toward the combination claimed. Accordingly, Applicant respectfully requests that the Examiner reconsider the rejection based on Berger in view of Aoki et al.

Claims 1 - 7, 9 - 11, 15 and 23 - 27 have also been rejected based on Sasa et al. (U.S. 4,907,830) in view of Aoki et al.

The Sasa et al. reference provides a corrugated hose 6 that is held in part 4 and has a left side end that is frictionally held within part 1 by an annular seal 24 as is shown in Fig. 2 (see also Fig. 5). The frictional holding is between the seal and another generally cylindrical seal member inserted in the cylindrical body 1 and extending into the corrugated hose (see for example column 4, third paragraph).

As such, Sasa et al. also fails to teach and fails to suggest the ability to freely rotate while providing an axial fixation as specified in the claims as presented. There is no ability to provide such rotation with axial fixing between the holding parts on the one side and the corrugated hose on the other side according to the teachings of Sasa et al. Further, the corrugated hose of Sasa et al. would be squeezed or twisted if a rotary movement is executed

or if rotational forces are applied to the other free end. Of course the rotation of one end is exactly the movement that often occurs with robot structure. As such, the combination of features are important in the industrial robot field as mentioned in the disclosure and the various references do not address the problem which is addressed according to the invention.

Applicant respectfully requests that the Examiner reconsider the rejections in view of the revised claims and new claim presented herewith.

Respectfully submitted
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